

**Multimode Relay MT**

- 2 / 3 pole 10 A, 2 CO or 3 CO contacts
- DC and AC coils
- Mechanical indicator as standard
- Electrical indicator
- New test system with front operated finger protected push-to-test button and integral locking test tab
- White write on panel
- RoHS compliant (Directive 2002/95/EC) as per product date code 0415

**Applications**

Mechanical engineering, plant control



F0161-A

**Approvals**

VDE REG.-Nr. 6182, **CE** us E214025  
Technical data of approved types on request

**Contact data**

Contact configuration	2 CO or 3 CO		
Contact set	single cont.	single cont.	bifurcated
Type of interruption	micro disconnection		
Rated current	10 A	10 A	4 A
Rated voltage / max.switching voltage AC	240/400 VAC		
Maximum breaking capacity AC	2500 VA	2500 VA	500 VA
Limiting making capacity, max 20 ms	20 A	20 A	8 A
Contact material	AgNi90/10	AgNi90/10 gold plated	AgNi90/10 gold plated
Minimum contact load	12V/10mA	20mV/1mA	20mV/1mA
Mechanical endurance	20x10 <sup>6</sup> cycles		
Rated frequency of operation with / without load	20/100 min <sup>-1</sup>		

**Contact ratings**

Type	Load	Cycles
MT321	10 A, 250 VAC, CO contact, cosφ=1, 360/h, df 50%, 35°C	2.2x10 <sup>5</sup>
MT321	I <sub>on</sub> 50 A, I <sub>off</sub> 5 A, 3x440 VAC, NO, cosφ=0.3, AC15, normal cond.	6x10 <sup>3</sup>
MT321	I <sub>on</sub> 30 A, I <sub>off</sub> 3 A, 3x440 VAC, NC, cosφ=0.3, AC15, normal cond.	6x10 <sup>3</sup>
MT3..	2 A, 125 V, L/R 30 ms, 3 NO contacts in series, 1800/h, DF 10%	1x10 <sup>5</sup>
MT2..	0.7 A, 125 V, L/R 20 ms, 2 NO contacts in series, 1800/h, DF 10%	2x10 <sup>5</sup>
MT2..	1 A, 125 V, L/R 20 ms, 2 NO contacts in series, 1800/h, DF 10%	4x10 <sup>4</sup>

**Coil data**

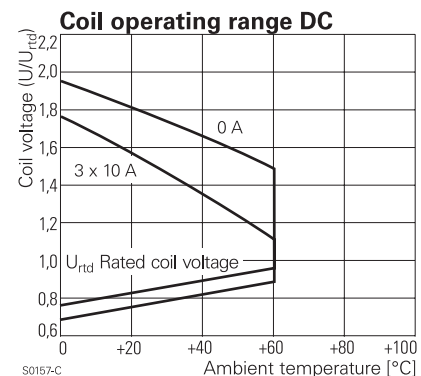
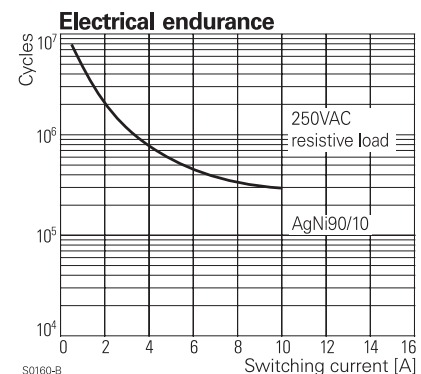
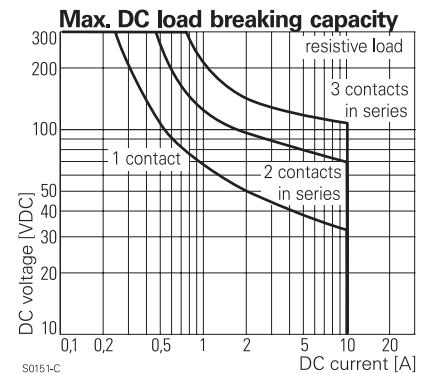
Rated coil voltage range	DC coil	6...220 VDC
	AC coil	6...230 VAC
Coil power DC coil		1.2 W
	AC coil	2.3 VA
Operative range		1

**Coil versions, DC-coil**

Coil code	Rated voltage VDC	Operate voltage VDC	Release voltage VDC	Coil resistance Ohm	Rated coil power W	
STD	PD*)					
006	0A6	6	4.5	0.6	32±10%	1.1
012	0B2	12	9.0	1.2	110±10%	1.3
<b>024</b>	<b>0C4</b>	<b>24</b>	<b>18.0</b>	<b>2.4</b>	<b>475±10%</b>	<b>1.2</b>
048	0E8	48	36.0	4.8	2000±10%	1.2
060	0G0	60	45.0	6.0	2850±10%	1.3
110	1B0	110	82.5	11.5	10000±12%	1.2
220	2C0	220	165.0	22.0	40000±15%	1.2

All figures are given for coil without preenergization, at ambient temperature +23°C

\*) Protection diode PD; standard polarity: 2-pole relays: +2 / -7, 3-pole relays: +2 / -10



**Coil versions, AC-coil 50/60 Hz**

Coil code	Rated voltage	Operate voltage 50/60Hz	Release voltage 50/60Hz	Coil resistance Ohm	Rated coil power 50/60Hz VA
	VAC	VAC	VAC	Ohm	VA
006	6	4.8	2.4	5.3 ± 10%	2.29/1.98
012	12	9.6	4.8	24 ± 10%	2.19/1.86
<b>024</b>	<b>24</b>	<b>19.2</b>	<b>9.6</b>	<b>86 ± 10%</b>	<b>2.26/1.95</b>
048	48	38.4	19.2	345 ± 10%	2.28/1.97
060	60	48.0	24.0	544 ± 10%	2.27/1.96
115	115	92.0	46.0	2000 ± 10%	2.37/2.00
<b>230</b>	<b>230</b>	<b>184.0</b>	<b>92.0</b>	<b>8300 ± 12%</b>	<b>2.32/1.96</b>

All figures are given for coil without preenergization, at ambient temperature +23°C

**Insulation**

Dielectric strength coil-contact circuit	2500 V <sub>rms</sub>
open contact circuit	1500 V <sub>rms</sub>
adjacent contact circuits	2500 V <sub>rms</sub>
Clearance / creepage coil-contact circuit	≥ 2.8/4.0 mm
adjacent contact circuits	≥ 2.8/4.0 mm
Material group of insulation parts	≥ IIIa
Insulation to IEC 60664-1	
Type of insulation coil-contact circuit	basic
open contact circuit	functional
adjacent contact circuits	basic
Rated insulation voltage	250 V
Pollution degree	2
Rated voltage system	240/400 V
Overvoltage category	III

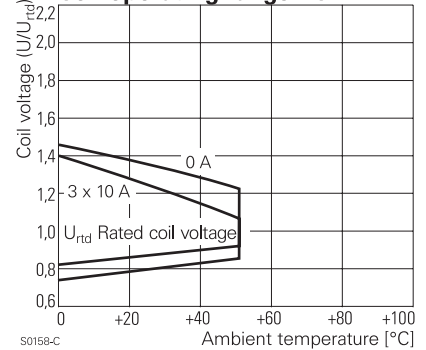
**Other data**

RoHS - Directive 2002/95/EC	compliant as per product date code 0415
Ambient temperature range DC coil	-40...+60°C
AC coil	-45...+50°C
Operate- / release time	12/5 ms
Bounce time NO / NC contact	4 ms
Vibration resistance (function) NO / NC contact	5/2 g
Shock resistance (function) NO / NC contact	50/10 g
Category of protection	RT1 - dust protected
Relay weight	80 g
Packaging unit	25 pcs

**Accessories**

For details see datasheet Accessories Multimode Relay MT

**Coil operating range AC**



**Terminal assignment**

Bottom view on pins



**Dimensions**



**Product key**

Type

Contact configuration

**2** 2 CO contacts, 8-pin **3** 3 CO contacts, 11-pin

Contact material

**2** AgNi 90/10 **B** AgNi 90/10 bifurcated contacts, gold plated  
**3** AgNi 90/10, gold plated

Version

**1** DC with test button **6** AC with test button  
**3** DC with test button and bipolar LED **8** AC with test button and LED

Coil

Coil code: please refer to coil versions table, preferred types in bold print

Other types on request



**Multimode Relay MT** (Continued)

Product key	Contact configuration	Contact material	Version	Coil	Part number		
MT221012	2 CO contacts 8-pin	AgNi 90/10	DC	12 VDC	4-1393090-9		
MT221024				with test button	24 VDC	5-1393090-0	
MT221048				48 VDC	5-1393090-1		
MT221060				60 VDC	5-1393090-2		
MT221110				110 VDC	5-1393090-3		
MT221220				220 VDC	5-1393090-4		
MT223024				DC+LED+test button	24 VDC	5-1393090-7	
MT226012				AC	12 VAC	6-1393090-3	
MT226024				test button	24 VAC	6-1393090-4	
MT226048					48 VAC	6-1393090-5	
MT226115					115 VAC	6-1393090-7	
MT226230					230 VAC	6-1393090-8	
MT228024					AC+LED	24 VAC	6-1393090-9
MT228115					test button	115 VAC	7-1393090-0
MT228230						230 VAC	7-1393090-1
MT321012	3 CO contacts 11-pin	AgNi 90/10	DC	12 VDC	6-1393091-8		
MT321024				with test button	24 VDC	7-1393091-0	
MT321048				48 VDC	7-1393091-1		
MT321060				60 VDC	7-1393091-2		
MT321110				110 VDC	7-1393091-4		
MT321220				220 VDC	7-1393091-7		
MT323024				DC+LED+test button	24 VDC	8-1393091-4	
MT3230C4				DC+LED+PT+TB	24 VDC	7-1393091-9	
MT326012				AC	12 VAC	9-1393091-6	
MT326024				test button	24 VAC	9-1393091-7	
MT326048					48 VAC	9-1393091-8	
MT326115					115 VAC	0-1393092-1	
MT326230					230 VAC	0-1393092-2	
MT328024					AC+LED	24 VAC	0-1393092-4
MT328115					test button	115 VAC	0-1393092-7
MT328230						230 VAC	0-1393092-8
MT331024				AgNi 90/10 gold plated	DC	24 VDC	1-1393092-1
MT331110			with test button			110 VDC	1-1393092-3
MT331220					220 VDC	1-1393092-5	
MT333024					DC+LED+test button	24 VDC	1-1393092-8
MT3330C4					DC+LED+PD+TB	24 VDC	1-1393092-6
MT333110					DC+LED	110 VDC	2-1393092-0
MT333220					test button	220 VDC	2-1393092-2
MT336115					AC	115 VAC	2-1393092-5
MT336230					test button	230 VAC	2-1393092-6
MT338024					AC+LED	24 VAC	2-1393092-7
MT338115					test button	115 VAC	8-1415025-1
MT338230			230 VAC		2-1393092-8		